

AMENDMENTS TO THE CLAIMS

Claims 1-169 (Canceled)

170. (currently amended) A semiconductor component comprising:

- a thinned semiconductor die having a circuit side, a back side, four peripheral edges, ~~and~~ a plurality of die contacts on the circuit side, and a selected thickness T_s ;
- a plurality of contact bumps on the die contacts;
- a first polymer layer planarized to a precise thickness T_{cs} comprising a continuous layer ~~self-planarizing thermoset underfill film~~ covering the circuit side and the peripheral edges to the back side, the first polymer layer having a first planar surface on the circuit side and continuous edge polymer layers covering and rigidifying the peripheral edges; ~~and~~
- a second polymer layer planarized to a precise thickness T_p covering the back side having a second planar surface,
- the first polymer layer and the second polymer layer encapsulating the die on six sides and supporting the die, the contact bumps and the peripheral edges; and
- a plurality of terminal contacts on the contact bumps.

171. (previously presented) The semiconductor component of claim 170 wherein the die comprises a tested and burned in die and the component comprises a known good component (KGC).

172. (currently amended) The semiconductor component of claim 170 wherein the first polymer layer comprises a thermoset underfill film, ~~ures and planarizes at a temperature of about 200-250 °C, has a Young's modulus of about 4G Pascal, and a coefficient of thermal expansion (CTE) of about 33 parts per million per °C.~~

173. (currently amended) The semiconductor component of claim 170 wherein the second polymer layer comprises ~~the~~ a thermoset underfill film.

174. (withdrawn) The semiconductor component of claim 170 wherein the first polymer layer and the second polymer layer have beveled edges.

175. (currently amended) The semiconductor component of claim 170 wherein the first polymer layer comprises a thermoset underfill film having a cure temperature of about 200-250 °C, a Young's modulus of about 4G Pascal, and a coefficient of thermal expansion (CTE) of about 33 parts per million per °C.
~~further comprising a plurality of terminal contacts on the contact bumps.~~

176. (currently amended) The semiconductor component of claim 170 wherein the terminal contacts are arranged in a dense ball grid array (BGA).
~~first polymer layer has a thickness which is less than a height of the contact bumps and each contact bump is surrounded by a portion of the first polymer layer.~~

177. (previously presented) The semiconductor component of claim 170 wherein the die includes conductive vias in electrical communication with the die contacts and the contact bumps.

178. (previously presented) The semiconductor component of claim 170 wherein the die contacts comprise bond pads.

179. (withdrawn) The semiconductor component of claim 170 wherein the die contacts comprise redistribution pads.

Claims 180-261 (canceled)

262. (previously presented) The semiconductor component of claim 170 wherein the die contacts comprise a solderable metal, and the contact bumps comprise solder.

263. (currently amended) The semiconductor component of claim 170 wherein the terminal contacts and the contact bumps having a height selected to provide a desired spacing for flip chip mounting the component.
further comprising a plurality of terminal contacts on the die in electrical communication with the contact bumps in a standardized grid array.

264. (currently amended) The semiconductor component of claim 170 ~~further comprising a plurality of terminal contacts comprising~~ wherein the terminal contacts comprise ball bonds on the contact bumps.

265. (previously presented) The semiconductor component of claim 170 wherein the first polymer layer on each edge comprises a portion of a polymer filled trench.

266. (previously presented) The semiconductor component of claim 170 wherein the edge polymer layers and the back side have a same planar surface.

267. (currently amended) The semiconductor component of claim 170 wherein the edge polymer layers have ~~a selected~~ an edge thickness which is different than a the thickness T_{cs} of the first polymer layer.

268. (previously presented) The semiconductor component of claim 170 wherein the die comprises a tested and burned in die.

269. (previously presented) The semiconductor component of claim 170 wherein the die is contained on a semiconductor wafer having a polymer support dam proximate to edges thereof.

270. (currently amended) The semiconductor component of claim 170 wherein the second polymer layer comprises ~~the a thermoset~~ underfill film ~~, and the underfill film cures and planarizes at a~~ having a cure temperature of about 200-250 °C, has a Young's

modulus of about 4G Pascal, and a coefficient of thermal expansion (CTE) of about 33 parts per million per °C.

271. (previously presented) The semiconductor component of claim 170 wherein the second polymer layer comprises parylene.

Claim 272 (canceled)